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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,891	10/01/2004	Frank Dietsche	4372-4	2859
23117 7590 10/02/2007 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			EXAMINER CAMERON, ERMA C	
			ART UNIT 1762	PAPER NUMBER
			MAIL DATE 10/02/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/509,891

Applicant(s)

DIETSCH ET AL.

Examiner

/Erma Cameron/

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 33-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 33-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 33-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) Claim 1: in the definition of  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$  and  $R^5$  the use of “may be” and “possible” is indefinite and vague in that it is not clear if these definitions are as defined, or if the definitions are only possibilities.

b) Claim 1: “alkyl substituents or other aryl substituents” is unclear in that it is not clear what “other” is referring to. Other than what?

c) Claim 1, last three lines under ab1): the repetition makes the meaning unclear.

d) Claim 1, b): “capable of” is vague in that it is unclear if the polymer actually dissolves, etc, or is merely capable of it.

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e) Claim 1, c): it is not clear what is meant by “further”, in that additives has not been previously mentioned.

f) There is no antecedent basis for:

claim 1, ab1)	the stated radicals
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claim 1, b)	the polymer
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claim 38, line 2	a polymer
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claim 45, line 2	a polymer
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g) Claim 36: the phrase "preferably" renders the claim indefinite because it is unclear what the limitation(s) of the claim are.

h) Claim 36: it is not clear what is meant by “nitrogen base”. In addition, the claim should read “...at least one of...”

i) Claim 37, line 2: “D” has not been defined in this claim or in claim 33 on which it is dependent. It appears that this claim should be dependent on claim 36 instead.

j) Claim 37 g): it is not clear what is meant by “further” corrosion inhibitor, as no first corrosion inhibitor has been mentioned.

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k) Claim 37 i): it is not clear what is meant by “further” auxiliaries, as no first auxiliary has been mentioned.

l) Claim 37 k): it is not clear what is meant by “further” additives, as no first additive has been mentioned.

m) Claim 38 and 45: it is not clear if the layer is actually obtained, or is merely “obtainable”.

n) Claim 38 and 45: it is not clear why “component A” is listed after claim 33. Aren’t all the components of claim 33 required?

o) Claim 41 and 48: it is not clear if the composition is the same as in claim 33.

p) Claims 43, 44, 50 and 51: it is not clear if the plural of film is meant to imply that more than one film is required.

q) Claims 33, 36 and 37: “where appropriate” is not defined, and is therefore indefinite.

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3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 33-51 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification contains references to oxides and hydroxides, as in [0040], as salts.

Oxides and hydroxides are not salts. Therefore, it is unclear what components are meant.

*Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 33-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz et al (US 2002/0146515).

Note: the examiner has treated “optionally”, as in ab2), and “where appropriate”, as in claim 33 c), claim 36 and claim 37 as these components not being required.

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'515 teaches an anti-corrosion coating for metals, such as steel or aluminum [0104], that comprises 80-99.5 wt % of a copolymer of monomer A, which may be acrylic acid; 0.5-10 wt% of monomer B, which may be maleic anhydride [0026], optionally a phosphoric acid [0038], optionally an amino group containing molecule [0038], and an additive such as a complexing agent [0038]. The coating is applied by spraying and other means [0071], and may be followed by further coatings [0069].

The % of each component overlaps with that claimed by applicant.

Regarding claim 34, because phosphoric and phosphonic are optional in claim 33, they are also optional and not required in claim 34.

Regarding the thickness claims of claims 39 and 46, the thickness of the coating is given in  $\text{g/m}^2$ , so a comparison is difficult. However, it would have been obvious to one of ordinary skill in the art to have optimized the coating thickness, as thickness is known to be an important parameter to control in an anti-corrosion coating.

7. Claims 33-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Denzinger et al (5175361).

'361 teaches a composition that can be used as a scale inhibitor in a water system (1:61) that comprises water, 40-90 wt% of acrylic acid, 10-60 wt% of maleic anhydride and 0-20 wt% of VPA, as well as amine or ammonium salts, and other additives such as free radical initiators (2:3-2:55, see example 1).

The composition overlaps that claimed by applicant.

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8. Claims 33-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirk et al (5601723).

'723 teaches a composition to be used in water circulating systems that comprises water, 3-50 wt % of maleic anhydride (5:43), 50-97 wt% of acrylic acid (5:61), 0-40 wt % of VPA (6:14), as well as amino containing compounds (6:3-22) and other additives such as water soluble metal salts or corrosion inhibitors (6:23-40) (2:34-62; 8:50-55; 10:58-11:5).

The composition overlaps that claimed by applicant.

### *Conclusion*

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Erma Cameron/ whose telephone number is 571-272-1416. The examiner can normally be reached on 8:30-6:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Erma Cameron/  
Primary Examiner  
Art Unit 1762

September 28, 2007